

Please cancel claims 28 and 29.

Please replace claims 10, 19, 25, and 32 as follows.

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10. (once amended) A receiver, comprising:

- C<sup>1</sup>  
cancel*
- a substrate;
  - a first mixer that performs up-conversion and is disposed on the substrate;
  - a differential filter coupled to an output of the first mixer; and
  - a second mixer that performs down-conversion, disposed on the substrate and coupled to an output of the differential filter.
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19. (once amended) A receiver that processes a RF signal having a plurality of channels, the receiver comprising:

- C<sup>2</sup>  
cancel*
- a substrate;
  - a first circuit, disposed on the substrate, that up-converts the RF signal to a first IF signal;
  - a differential filter that removes at least one channel from the first IF signal;
  - a second circuit, disposed on the substrate, that performs image rejection and down-conversion and generates a second IF signal; and
  - at least the first IF signal comprising a differential signal.
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25. (once amended) A method for processing a RF signal having a plurality of channels, comprising:

- C<sup>3</sup>  
cancel*
- (1) mixing the RF signal with a first differential local oscillator signal to produce a first differential IF signal;
  - (2) removing at least one unwanted channel from the first differential IF signal using a differential filter to produce a second differential IF signal;
  - (3) adjusting the first local oscillator signal so that a selected channel in the plurality of channels is shifted into a passband of the differential filter; and
  - (4) mixing the second differential IF signal with a second differential local oscillator signal to produce a second differential IF signal;

*C<sup>3</sup> contd.*  
wherein steps (1), (3), and (4) are performed on a common substrate, and wherein step (2) is performed external to the common substrate.

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32. (once amended) A receiver for processing a plurality of channels, comprising:

*C<sup>4</sup> contd.*  
a substrate;

a first differential mixer disposed on the substrate, and that performs up-conversion;

a differential filter coupled to an output of the first differential mixer and configured external to the substrate; and

a second differential mixer, disposed on the substrate and coupled to an output of the differential filter, said second differential mixer providing down-conversion and image rejection.

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